



YEFL Meeting 2022

*In the Framework of WFEO General Assembly meetings in
San Jose, Costa Rica*

MARCH 2 , 2022



The World Federation of Engineering Organizations:

- **The peak body for professional engineering organizations**
- **Founded in 1968**
- **Under the auspices of UNESCO**
- **100+ national professional engineering institutions**
- **12 international and continental/regional professional engineering institutions**
- **Representing 30 million engineers**



WFEO / FMOI



Algeria
Argentina
Australia
Bahrain
Bangladesh
Belize
Bolivia
Brazil
Bulgaria
Cameroon
Canada
Chile
China
Chinese Taipei
Colombia
Costa Rica
Croatia
Cuba
Cyprus
Czech Republic

Ecuador
Egypt
Ethiopia
Fiji
France
Germany
Ghana
Greece
Honduras
Hong Kong, China
Hungary
India
Iraq
Italy
Ivory Coast
Japan
Jordan
Kenya
Korea
Kuwait

Lebanon
Libya
Macedonia (FYROM)
Madagascar
Malawi
Malaysia
Malta
Mauritius
Mexico
Moldavia
Mongolia
Montenegro
Morocco
Nepal
New Zealand
Nigeria
Pakistan
Palestine
Peru
Poland

Portugal
Puerto Rico
Qatar
Romania
Russia
Rwanda
Saudi Arabia
Senegal
Serbia
Sierra Leone
Singapore
Slovakia
Slovenia
South Africa
Spain
Sri Lanka
Sudan
Switzerland
Syria
Tanzania

The Philippines
Tunisia
Turkey
Uganda
Ukraine
United Arab
Emirates
United Kingdom
United States
Uruguay
Yemen
Zambia
Zimbabwe



**Founded under the auspices of UNESCO and
Recognised NGO**

**Co-Chair - Major Science and Technology Group at
UN**

Representation at major UN Organisations

Based in Paris at UNESCO



WFEO Committees @ Oct 2021

Focus on SDGs and Outcomes

Standing Technical Committees

- Engineering and the Environment (Hosted by UK)
- Energy (Hosted by France)
- Engineering Education (Hosted by Myanmar)
- Information and Communication – Industry 4.0 & Smart Cities (Hosted by India)
- Engineering and Innovative Technologies – AI and Data (Hosted by China)
- Engineering Capacity Building (Hosted by Zimbabwe)
- Disaster Risk Management (Hosted by Peru)

Technical Working Groups

- Water (Hosted by Spain)
- Infrastructure Report Card (Hosted by Federation of African Engg. Org.)

Policy Implementation Committees

- Anti-Corruption (Hosted by Rwanda)
- Women in Engineering (Hosted by Nigeria)
- Young Engineers/Future Leaders (Hosted by Lebanon)
- UN Relations Committee



Working with International Organisations

- UN Economic and Social Council, (ECOSOC)
- UN Department of Economic and Social Affairs (UNDESA)
- UN Development Program (UNDP)
- UN Educational, Scientific and Cultural Organisation (UNESCO)
- UN Industrial Development Organisation (UNIDO)
- UN Environmental Program (UNEP)
- UN Framework on Climate Change (UNFCCC)
- UN Office for Disaster Risk Reduction (UNISDR)
- The International Atomic Energy Agency (IAEA)
- The World Meteorological Organisation (WMO)
- World Bank, OECD etc.



- A key objective of the World Federation of Engineering Organizations is to **advance the UN SDGs through engineering**
- We need to ensure that we have more engineers with the right skills to develop the technologies and engineering solutions for sustainable development



Young Engineers / Future Leaders (YE/FL)

- The WFEO committee on Young Engineers / Future Leaders (YE/FL) is a motivated team of young engineers that work voluntarily to make (YE/FL) acknowledged and celebrated as the global leader for the young voices of the engineering profession. The work of the (YE/FL) is aimed at enabling a sustainable ecosystem that provides support, resources and a platform for young engineers in the WFEO community, highlighting the role of young engineers worldwide in achieving the UN Sustainable Development Goals.



VISION

To be acknowledged as the global leader for the young voices of the engineering profession

MISSION

To be a sustainable ecosystem that provides support, resources and a platform for young engineers

AIMS

- Create an ecosystem that nurtures and enables support and youth innovation for young engineers in the WFEO.
- Establish regular conversation between the WFEO and the young engineers.
- Provide mentorship programs between young engineers and WFEO and partner communities.
- Increase the understanding of the international, national, and regional awareness on the impact of globalization on young engineers.
- Address the issue of sustainability for the wellbeing of the engineering profession.
- Support the WFEO's President's Task Force engaging with the United Nations Commission on Sustainable Development to provide the engineering perspective on the current issues.





WHAT DO YOU WANT TO LEARN MORE ABOUT?

Our exciting 2022 Global Programme



GLOBAL EVENTS

Register your own World Engineering Day event, or discover an official event in your region.

[FIND OUT MORE](#)



HACKATHON

Learn more about our university-aligned official WED Hackathon, launching in 2022.

[FIND OUT MORE](#)



24 HRS LIVE

Watch the 24HRS LIVE Stream FREE from here. Our Homepage.

[FIND OUT MORE](#)



WORLD ENGINEERING DAY HACKATHON

2022 CHALLENGES

click on challenge below to find out more

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



CHALLENGE 1

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



CHALLENGE 2

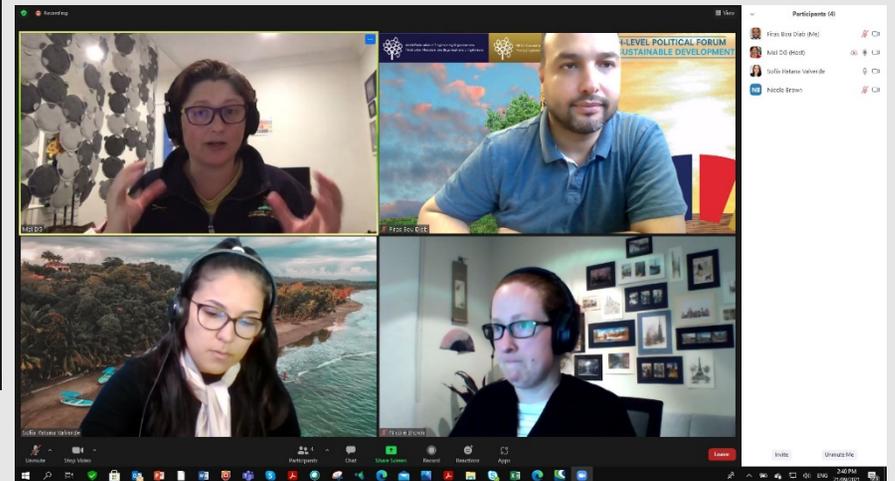
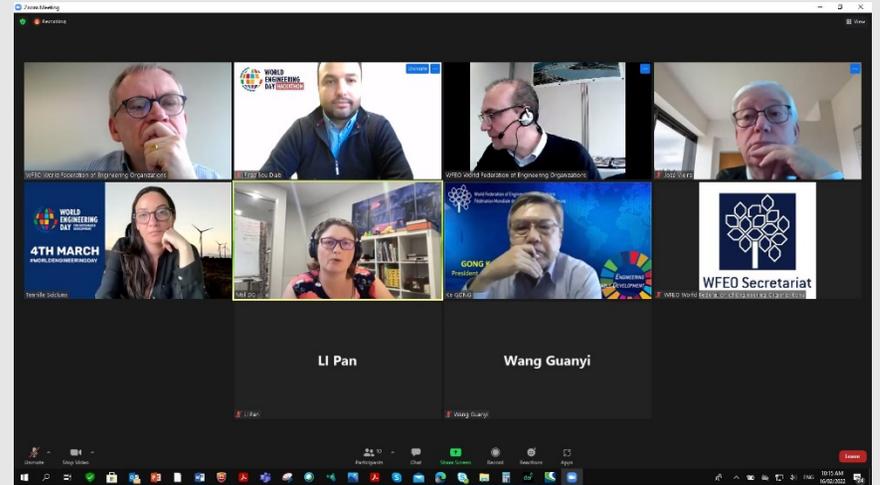
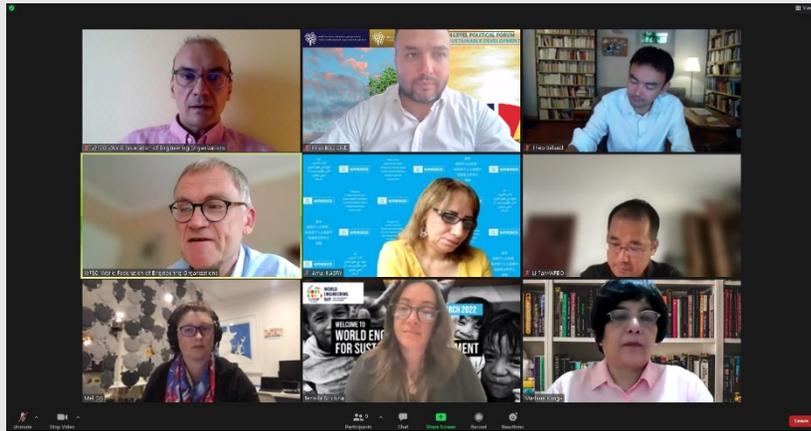
6 CLEAN WATER
AND SANITATION



CHALLENGE 3

Aligned with a 2022 Theme: Build Back Wiser – Engineering the Future, the World Engineering Day Hackathon will encourage engineering students to work in teams towards a global real-world problem.

This competition is a fast-paced simulation of a real-world project. Teams are to work collaboratively on a problem to provide a set of deliverables within a short timeframe. Utilizing their theoretical knowledge, students gain first-hand experience to develop their critical thinking, build new skill sets, push themselves out of their comfort zone and build lasting relationships.





Watch the 24HRS LIVE Stream FREE from here, our Homepage.

World Engineering Day is thrilled to announce the highly anticipated launch of World Engineering Day **24HRS LIVE**. This is the first ever **24HRS LIVE** broadcast of a **Global UNESCO Day**. This studio produced broadcast will follow World Engineering Day 2022 around the globe, to see how Engineer's across the world are celebrating and being recognised for their great work.

Starting from Australia, ending in Costa Rica and featuring everything in between. Our program will hit 8 major regions over 24 hours.

FIND OUT MORE



TUESDAY
15th FEB 2022
13:00-14:30
(CET)

World Engineering Day 2022
Build Back Wiser – Engineering the Future
Inspiring and Collective Young Engineering Vision

Speakers:

Moderator:
Christopher Chukwunta
Vice President of the International Renewable Energy Systems Inc, (Nigeria)

Firas Bou Diab
Chair WFEO Young Engineers/Future Leaders Committee (Lebanon)

Nadja Yang
President, European Young Engineers (EYE) (Germany)

Rodrigo Juárez
Vice-Chair of the FIDIC Future Leaders Council - International Federation of Consulting Engineers (M é xico)

Maria Laura Polo Gonzalez
Vice-President of Educational Content and President Elect, The Student Platform for Engineering Education Development (SPEED) (USA)

Logos: WFEO, FMOI, FIPIC, EYE, WFEO-YEFL, Sustainable Development Goals

QR code and Register: <https://bit.ly/3H5F2jk>



Watch here
<https://youtu.be/wc5j5g7k0eg>



THE UNIVERSITY OF SYDNEY

Welcome to
The Warren Centre's
Humanitarian Innovation Awards
Engineering solutions for the most vulnerable



2022 FRI 04 MAR
HUMANITARIAN INNOVATION PITCH THE PITCH LAUNCH
🕒 (All Day: Friday)

👁️ View in my time

📍 University of Sydney, Camperdown
Year: World Engineering Day 2022

VIRTUAL EVENT
World Engineering Day

Engineering for Impact

March 2022
Ice Centre, TPM

in partnership with





2022 FRI 04 MAR SAT 05
MRANTI WORLD ENGINEERING DAY 2022 - ... A CELEBRATION OF ENGINEERING AND THE CONTRI...
🕒 (All Day)

👁️ View in my time

📍 MRANTI (formerly known as Resource Centre, Technology Park Malaysia), Kuala Lumpur, Malaysia
Year: World Engineering Day 2022



2022 FRI 04 MAR
WORLD ENGINEERING DAY ZAMBIA
🕒 (All Day: Friday)

👁️ View in my time

📍 Zambia, zambia
Year: World Engineering Day 2022

2022 FRI 04 MAR SAT 05
WORLD ENGINEERING DAY 2022 ENGINEERING FOR IMPACT
🕒 (All Day)

👁️ View in my time

📍 Malaysia, Malaysia
Year: World Engineering Day 2022

VIRTUAL EVENT
World Engineering Day

Engineering for Impact

March 2022
Ice Centre, TPM

in partnership with





2022 FRI 04 MAR SAT 05
ENGINEERING FOR IMPACT A CELEBRATION OF ENGINEERING AND THE CONTRI...
🕒 (All Day)

👁️ View in my time

📍 MRANTI (formerly known as Resource Centre, Technology Park Malaysia), Kuala Lumpur, Malaysia
Year: World Engineering Day 2022



2022 FRI 04 MAR SAT 05
GET RECOGNIZED! - WORLD ENGINEERING ... YOUNG ENGINEERS AND THE SUSTAINABLE DEVEL...
🕒 (All Day)

👁️ View in my time

📍 Nigeria, Nigeria
Year: World Engineering Day 2022



YE/FL ACTIVITIES



WED 2020

YEFL Celebrating the Achievements of Young Engineers Around the World

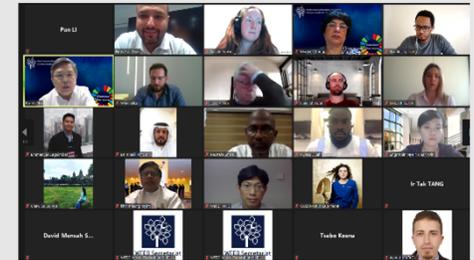
The goal of the competition was to highlight the work of young engineers and their engineering achievements in advancing the UN SDGs. More than 400 young engineers from 70 countries participated.



WED 2021

YEFL Video Campaign: Young Engineers Leading the Way

More than 40 young engineers from more than 20 countries, including many from the leading engineering universities of the world, showcased their videos that highlighted the important role that young engineers play towards accelerating action towards sustainable development.



YE/FL ACTIVITIES

WED 2020 Mini-Series

Engineering Heroes, with the support of the World Federation of Engineering Organisations, launched 17 mini-episodes of Podcasts. Each episode was aimed at helping the audience understand how engineers are perfectly placed, and already working, within each of the United Nations Sustainable Development Goals. More than **4,000 audiences** from more than **70 countries** listened to Podcast Episodes, each rated in the top 20% to top 50% of podcasts worldwide. The report “WFEO Podcast for WED 2020” is available [in this page](#).





YE/FL Webinar Series "Engineering the Future"



WEDNESDAY 22 JULY
14:00-15:00 CET (UTC+02:00)

ENGINEERING THE FUTURE
RESILIENCE AND SUSTAINABILITY FOR YOUNG ENGINEERS

Moderator:
Firas Bou Diab
Chair, Young Engineers / Future Leaders Committee - WFEO

Speakers:
Prof. GONG Ke
President of WFEO
Matthew Baldwin
Deputy Director General for Mobility and Transport, European Commission

Register: <https://bit.ly/3BZJklg>

MONDAY 12th OCTOBER
14:00-16:00 (CET)

Webinar Series "Engineering the Future"
-CLIMATE ACTION-

Moderator:
Wafa Fakhri
WFEO YE/FL member

Speakers:
Yuhua Wang
President of the Institute of Energy Economics, CNPC
David Shorrock
Chief of R&D, Lucasfilm
Sven Thoenes
Deputy Director at the European Research Task for Industry 4.0
Wafa Fakhri
WFEO YE/FL member
Jarkko Lemmela
Sustainable Solutions Policy Director, HELIXO, UNICEF Engineering Unit
Farah Alshaykh
Senior Analyst
Firas Bou Diab
Chair of WFEO YE/FL Committee

FRIDAY 18th SEPTEMBER
15:00-17:00 BEIJING TIME (CET+6)

A Sustainable Future: Young Engineers and 4IR
during the 23rd China Beijing High-Tech Expo

Moderator:
Dr. PENG Jing
Chair of WFEO Committee on Engineering for Innovative Technologies

Speakers:
Prof. GONG Ke
President of World Federation of Engineering Organizations (WFEO)
Mr. Yohan Ramasundaram
Member of AI and ED WG, Immediate Past President, Australian Computer Society
Ms. Carol Cai
Product Owner of Digital Manufacturing in SAP
Eng. Firas Bou Diab
Chair of WFEO Young Engineers / Future Leaders Committee

WATER REUSE FOR A SUSTAINABLE INDUSTRY
Challenges and Opportunities in a Circular Economy

Speakers:
Alexandros Stefanakis
Editor in Chief of Journal of Cleaner Production
Joaquim Poças Martins
Member Secretary of the European Association of Pathology
Virginijus Sinkovicius
European Commissioner for Bioeconomy, Oceans and Fisheries
Hani-Martin Friae Mellor
CTO, Kaldemey Liming
Chairman, Euronet Water Forum
Francesca Pizzo
Secretary of the Joint Working Group on Water Reuse, Euronet

Moderator:
Jennifer Mallia
CEO of Water Reuse Forum

Introductory Talks:
Firas Bou Diab
Chair of WFEO YE/FL Committee
Nadja Yang
CEO, President of Water Policy

26 JANUARY
3:00 - 4:15 PM CET

Register here: <https://bit.ly/2NbcuZ7>

DECEMBER 8
8:30am CET / 6:30pm AEDT
Duration: 1 hour

The World Federation of Engineering Organizations (WFEO)
Young Engineers/Future Leaders Committee

Moderator:
Is pleased to invite you to the webinar series, "Engineering the Future"
Young Engineers Volunteering for the Future

Panelists:
Nicole Brown
WFEO YE/FL member
Felicity Pury
Founder - Power of Engineering and Machinam
Morgan Marshall
CEO - Robegals Global
Fons Janssen
Co-founder Green Deal 4 Youth
Firas Bou Diab
Chair of WFEO YE/FL Committee

Register here: https://zoom.us/join/register?wn_4MICYKwQGGCTMYN6b6cQ

MARCH 17
8:30am CET / 6:30pm AEDT
Duration: 1 hour

The World Federation of Engineering Organizations (WFEO)
Young Engineers/Future Leaders Committee

Is pleased to invite you to the next webinar in the YE/FL series, "Engineering the Future".
Young Engineers = Board Members?

Moderator:
Nicole Brown
WFEO YE/FL member

Speakers:
Avi Menon
Co-founder & Partner, Kolko
Mavis Elias
Founder & Chair of the Board, EM Foundation
Ted Chen
Co-founder, Evercomm Singapore
Stacey Daniel
Director, Advisor & Coach, Board Presence

Register here: bit.ly/3ru9JjH

FRIDAY 19th NOV 2021
14:00-15:30 (CET)

Webinar Series "Engineering the Future"
ETHICS IN ENGINEERING

Speakers:
Neil Sandhu
Co-Founder and Director, GIACC
Gregory Stoen
Chair, Ethics Committee, SAICE
Roshni Jadhav
Vice Chair, F2IC Future Leaders Council
Michael Mwangi
Chair, Young Members Panel of SAICE Member, WFEO YE/FL
Priscilla Kofamestwe
Member of the Young Members Panel & Ethics Committee, SAICE
Papais Kazawati
Chair, WFEO CAC
Firas Bou Diab
Chair, WFEO YE/FL

Moderator:
Michael Mwangi
Chair, Young Members Panel of SAICE Member, WFEO YE/FL

Register: <https://shorturl.at/prV24>

2nd UNESCO Engineering Report

Under the High Patronage of
Mr Emmanuel MACRON
President of the French Republic

ICEE
International Centre for
Engineering Education
国际工程教育中心
INTERNATIONAL
WFEO / FMOI

United Nations
Educational, Scientific and
Cultural Organization
World
Engineering Day

AGENDA - WED 2021
**Engineering for a Healthy Planet -
Celebrating the UNESCO Engineering Report**
4 March 2021
1:00-2:30pm CET (Paris time, online)
Registration: <http://on.unesco.org/Eng04-03>

Master of Ceremonies: Shamila Nair-Bedouelle, ADG/SC

13:00-13:40 High-level Opening and Launch of Report

- Audrey Azoulay, Director-General of UNESCO
- Li Xiaohong, President of Chinese Academy of Engineering (representing Tsinghua University and ICEE)
- Genna Rajam Bangaroo, Civil Engineering Student, University of Mauritius, Mauritius

Joint launch of the report by DG UNESCO and President CAE

13:40 - 14:00 Introduction to the Report on Engineering for Sustainable Development: Delivering on the Sustainable Development Goals

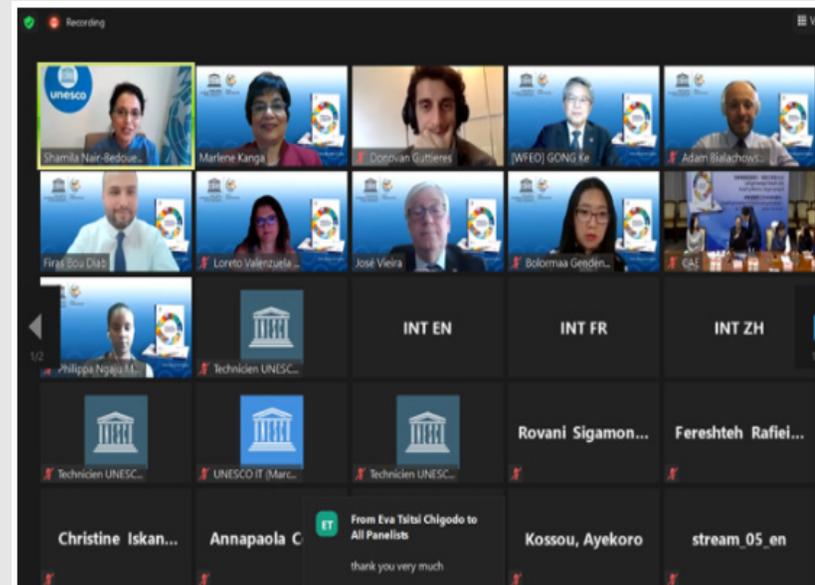
- Wu Qidi, Director of ICEE and Co-chair of Engineering Report Steering committee - Introduction of the Report
- Marlene Kanga, Immediate Past President, WFEO - Engineering to advance the UN Sustainable Development Goals
- Gong Ke, President, WFEO - Engineering Innovations responding to pressing Challenges
- José Vieira, President Elect, WFEO - Engineering education and capacity-building

14:00 - 14:25 Round-table on the Engineering Report

Moderator: Donovan Gutierrez, former Chair UN Major Group Children and Youth, MIT, engineer (USA)

- Firas Bou Diab, Chair, WFEO Young Engineers/Future Leaders (Lebanon)
- Adam Bialachowski, Chair, International Federation of Consulting Engineers (FIDIC) Young Leaders Council (Poland)
- Loreto Valenzuela Roediger, International Federation of Engineering Education Societies (IFEES), Associate Professor, Catholic University Chile, (Chile)
- Philippa Ngaju Makobore, IEEE, Head, Instrumentation Division, Uganda Industrial Research Institute (Uganda)
- Bolormaa Gendensuren, International Network for Women Engineers and Scientists (INWES), School of Chemical Engineering, University of Ulsan (South Korea)

14:25 - 14:30 Closing Remarks
Shamila Nair-Bedouelle, ADG/SC



Screenshot of speakers at the UNESCO-WFEO launch of the Second UNESCO Engineering Report



The report highlights the vital role of
Engineering in achieving the SDGs

WFEO YE/FL WG on SDG 13

Aim

Establish the strategy, defining how Young Engineers can contribute to SDG 13 and WFEO Declaration on Climate Emergency 2019

Objectives

- ✓ To collect and record best practices and challenges faced by Young engineers from Africa, Americas, ME, Asia / Pacific, Europe in Climate Action.
- ✓ Investigate the gaps and define the Climate Cction strategy for Young Engineers.
- ✓ Assist with the analysis of the technical, economic and environmental feasibility of sustainable development proposals, and the implementation of Best Practices to achieve SDG 13

Expected Results

The role of WFEO Young Engineers in SDG 13 is defined and deployed. WFEO YEFL Committee engage with Young Engineers representatives of all WFEO Members and collaborate with External Organizations, such as **UN-MGCY, YAG, YoU-CAN,...**



Deploying Global Youth capacity in UN policy and Engineering for SDG 13?

WFEO Committee for Young Engineers / Future Leaders:

- Aims for an engineering community where a diverse and inclusive membership can work collaboratively towards innovative climate mitigation strategies, engaging women and young engineers in particular to combat climate change.
- Set up a working group on SDG 13 to include young engineers into the global [WFEO Climate Emergency work](#)



WFEO – YE/FL HLPF 2021 Side Event

World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

WFEO Committee on Young Engineers / Future Leaders

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

United Nations HLPF 2021 Side Event - Webinar

Deploying Global Youth Capacity in UN Policy and Engineering for SDG 13

9 July 2021

1:00 - 2:30 PM ET New York / 7:00 - 8:30 PM CET Paris

Register Here: <https://bit.ly/2Ualsad>
Live Streaming: <https://bit.ly/3yyVa1c>

World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

Deploying Global Youth Capacity in UN Policy and Engineering for SDG 13

9 July 2021

World Federation of Engineering Organizations (WFEO)
Young Engineers / Future Leaders Committee

The crises of climate breakdown are the most serious issues of our time. Our major infrastructure systems of transport, energy, water, waste, telecommunications and food defenses play a major part, accounting for a vast portion of energy-related carbon dioxide (CO2) emissions while also having a significant impact on our natural habitats.

WFEO continues to raise awareness of the climate emergency and the urgent need for action amongst WFEO National Member Engineering Organizations and WFEO Partners, all stakeholders within the National Members and with Governments.

The event aims for an engineering community where a diverse and inclusive membership can work collaboratively towards innovative climate mitigation strategies, engaging women and young engineers in particular to combat climate change.

To register for this important event, please click on the following link: <https://bit.ly/2Ualsad>

The WFEO Committee on Engineering and the Environment Climate action notes are available here: <https://bit.ly/3h6997b>

World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

Program

- Opening
 - Gang Ke, WFEO President
 - Shamila Nair-Bedouelle, Assistant Director-General for Natural Sciences of UNESCO
- Presentations
 - Firas Basu Dab, Chair, WFEO Young Engineers / Future Leaders Committee
 - WFEO Global Initiatives and Activities - Working Group on SDG 13
 - Noreen Elstain, UN Secretary General's Youth Advisor on Climate Change (WGI)
 - Relevant Initiatives in Infrastructure and STEM skills for SDG 13
 - Manon Fresco, Focal Point for the Youth UNESCO Climate Action Network (YU-CAN)
 - Engaging young engineers in the development of the Youth UNESCO Climate Action Network (YU-CAN)
 - Videos - Winners of WFEO Young Engineers / Future Leaders Video Campaign at World Engineering Day 2021
 - Sara Nyberg, Country Representative Lead for Young Leaders in Energy and Sustainability (YES Europe) and former international coordinator of FEGH Sweden
 - Young engagement in technology in the UNFCCC and in the energy climate nexus
 - Emma Van Fossen, Product Engineer at Trans Technologies
 - The Role of Industry in Pursuing Climate Action
 - Milda Pfladate, Member, WFEO Young Engineers / Future Leaders Committee
 - WFEO Global Initiatives and Activities - Working Group on SDG 13 (continued)
- Q & A
- Conclusions and Recommendations
- Joël Vieira, WFEO President Elect

World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

Bios of the speakers

Prof. Dr. GANG KE has been working in the field of telecommunication and electronic engineering. From 2013 to 2021, he was appointed by Sun Xianning to the Scientific Advisory Board of the Secretary General of the United Nations. He served as the President of Tianjin University from 2008 to 2011. He carried on as the President of Nanke University in 2011 and stepped down in 2018.

He is the President of WFEO since the General Assembly in Melbourne in November 2019.

Shamila Nair-Bedouelle holds a PhD in Life Sciences from the University of Capetown in South Africa. She pursued her research career at the Institut Pasteur in Paris, then within the pharmaceutical industry at the MIT University Park in Boston, USA. She has pursued her research interests in parallel to her career at the United Nations.

Shamila Nair-Bedouelle is the Assistant Director-General for Natural Sciences of UNESCO.

Firas Basu Dab is a Project Manager and a Senior Transportation Engineer at a world leading planning and design consultancy. He has a considerable and diversified experience in many areas of transportation and infrastructure. He holds a Master of Civil Engineering from the American University of Beirut.

Firas Basu Dab is the Chair of the Young Engineers / Future Leaders committee at the World Federation of Engineering Organizations.

World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

Bios of the speakers

Noreen Elstain is an environmental and climate activist, started activism in 2012, with a Bachelor's degree in physics from the University of Khartoum, Sudan. She pursued her master's degree in renewable energy from the same University.

General coordinator for Youth and Environment - Sudan (YES) platform to give all environment working youth the networking they need.

Manon Fresco is a consultant at UNESCO, where she coordinates the Youth UNESCO Climate Action Network (YU-CAN) project both with the Natural Sciences and the Social and Human Sciences Sectors.

As part of the Youth Programme since 2019, and as a member of the UNESCO Climate Change Task Force, she works through the implementation of the YU-CAN project, on developing meaningful engagement and leadership of youth in climate projects and activities undertaken in UNESCO's area of competence.

Sara Nyberg is a consultant at the company South Pole with greenhouse gas accounting. She graduated in environmental and energy engineering. She has participated at the UK climate conferences since 2017 through her organization FEGH Sweden, and is active in YESGO, the platform that works with the UK Age Group for Children and Youth to coordinate youth climate action.

She is the Country Representative Lead for YES Europe (Young Leaders in Energy and Sustainability).

World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

HIGH-LEVEL POLITICAL FORUM ON SUSTAINABLE DEVELOPMENT

Bios of the speakers

Emma Van Fossen is an engineer in the Accelerated Development Program at Trans Technologies and has led decarbonization projects to reduce both external and internal greenhouse gas emissions through new technology and renewable energy investments.

She holds a mechanical engineering degree from California State University, Fresno.

Milda Pfladate is a civil engineer and Institution of Civil Engineers (ICE) representative to the WFEO Young Engineers / Future Leaders Committee.

She is a member of WFEO Action Group on COP 26 where she set up a working group on SDG 13 to include the global young engineers community to the WFEO climate emergency work.

Prof. Dr. Joël Vieira is a civil engineer with extensive experience in engineering education, research and management. He is Full Professor at University of Minho, Portugal, where he served as Vice Rector (2006-2012). He served as the President of the European Federation of National Engineering Associations (EFNA) from 2014 to 2020 and as the National Vice President of the Portuguese Association of Engineers from 2010 to 2016.

He is the President Elect of WFEO since the General Assembly in Melbourne in November 2019.



WFEO YE/FL in COP 26

CLIMATE DECLARATION

COP26 Joint Statement of International Youth Organisations

JOINT DECLARATION BY

- (i) Global Young Engineers Working Group on SDG13, Young Engineers / Future Leaders Committee, World Federation of Engineering Organisations
- (ii) Major Group for Children and Youth (MGCY) Science-Policy Interface Platform
- (iii) Members of the UN Secretary General's Youth Advisory Group on Climate Change
- (iv) YOUNGO – UNFCCC
- (v) Global Youth Climate Network
- (vi) UN Youth4Climate Pre-COP26 delegate, Latvia



First published: 28 October 2021



WFEO / FMO



NOTING THAT -

- 1. Youth are critical stakeholders in creating solutions and contributing to climate action;
- 2. Parties to the Paris Agreement on Climate Change committed to (A.2) -

"Holding the increase in global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change";

- 3. Parties to the Paris Agreement on Climate Change further committed (A.3, A.4) to deliver Nationally Determined Contributions (NDCs) which show the "highest possible ambition" to reach global peaking of greenhouse gas emissions as quickly as possible;

Notwithstanding these commitments, the latest UNFCCC NDC Synthesis Report issued on 17 September 2021 indicates that current plans would result in a global increase of emissions of 10% by 2030, instead of the halving of global emissions by 2030 required to meet Paris Agreement targets¹ and according to the Report of the UN Secretary General on Progress Towards the Sustainable Development Goals, global emissions of greenhouse gas emissions have continued to rise despite the temporary reduction in emissions in 2020 due to the COVID-19 pandemic, and levels of atmospheric CO₂ are currently in excess of 412 parts per million².

The International Energy Agency (IEA) in its report "Net Zero by 2050" noted that there was only a narrow pathway which would allow the 1.5°C Paris Agreement target to be met, which would require plans to end all new coal mines, coal mine extensions and expansion and development of all new oil and gas production;

The IEA has further noted that – "Energy transitions have to take account of the social and economic impacts on individuals and communities... The transition to net zero is for and about people. It is paramount to ensure avenues that not every worker in the fossil fuel industry can ease into a clean energy job, so governments need to promote training and develop resources for additional new opportunities. Citizens must be active participants in the entire process, making them 'no part of the transition and not simply subject to it.'"

¹ Ambition level of the Paris Agreement, United Nations, 2020
² "CO₂ Total global GHG emissions (not including LULUCF), using the current implementation of the latest NDCs of all Parties (Paris Agreement), 1.5°C compatible pathway (SSP1-1.9) in 2030 and in 2050, 100% CO₂ emissions in 2030 and 100% CO₂ net-zero in 2050" (https://www.iea.org/energydata/graphics/index.php?id=3000)
 IEA, "Net Zero by 2050" (https://www.iea.org/reports/net-zero-by-2050)
 IEA, "World Energy Outlook 2021" (https://www.iea.org/reports/world-energy-outlook-2021)
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7. The report of the Intergovernmental Panel on Climate Change (IPCC) of 9 August 2021 on the physical science basis for climate change (see endnote³) 156 governments and details "unequivocal" evidence of the full, irreversible impacts of human induced climate change in every region of the world, but still offers scope for limiting and mitigating the effect of such climate change provided that immediate steps are taken to address it;

8. The impacts of extreme weather events attributable to climate change, from wildfires, drought, flooding, tropical storms, melting polar and glacial ice deposits, sea level rise and acidification and attendant loss of critical biodiversity have increased in frequency and intensity with destructive consequences and huge economic, social and environmental impacts and costs in all regions of the world in the years since the Paris Agreement on Climate Change was agreed;

9. According to the United Nations – Water (UN-Water), "water is the primary medium through which we will feel the effects of climate change". Child survival will be challenged by climate change through greater food insecurity, lesser access to safe drinking water and sanitation and changing disease environments⁴;

NOW THEREFORE, WE, THE REPRESENTATIVES OF THE ABOVE YOUTH GROUPS, WITH THE SUPPORT OF THE ADDITIONAL SIGNATORIES SHOWN, CALL ON THOSE IN POSITIONS OF AUTHORITY TO ENDORSE THE FOLLOWING OBJECTIVES.

³ United Nations – Water (UN-Water), Water and Climate Change
 UN, "The Intergovernmental Panel on Climate Change"
 United Nations Children's Fund (UNICEF), 2018, "The Convention on the Rights of the Child: a crossroads"
 UN, "https://www.unicef.org/press/2018/08/20180820-press-release-20180820"

1. CLIMATE MITIGATION, ADAPTATION & RESILIENCE

All COP26 parties to commit to updating and implementing NDCs consistent with limiting the overall global warming to 1.5°C. The parties must adopt a legally binding target of achieving 50% reduction in emissions from 2010 levels by 2030, and net zero emissions by 2050, ensuring a clear roadmap for every sector.

All COP26 parties to reach an agreement on a roadmap to stop and prohibit exploration and development of new fossil fuel projects on a timescale compatible with the 1.5°C pathway. The parties to minimize the impact/report of such fuels and eliminate fossil fuel subsidies, support the transition to renewable energy decarbonization of the power sector, scaling up energy efficiency, and amending relevant underlying basis in the international law, specifically the Energy Charter Treaty. This roadmap is to include a "just transition" to achieve an equitable and sustainable low-carbon economy and to incorporate the UN SDG universal value of "Leave No One Behind" (protecting vulnerable communities).

All COP26 parties to ensure reasonably practicable protection of public health and livelihoods from the adverse effects of climate change, with a particular focus on groups and communities most vulnerable to those effects, such as children and youth, women, indigenous people, elderly, people with pre-existing conditions, and groups in the most affected geographical locations and low-income groups. The parties representing developed countries are encouraged to provide the necessary support to developing and least developed countries, in particular by helping to develop the response strategies and the infrastructure solutions to protect the public from the extreme weather events attributable to climate change.

All COP26 parties to ensure reasonable education capabilities to train more scientists and engineers, who are needed to understand the climate change mechanism better, and to conceive and implement the appropriate technologies for mitigation and adaptation, in particular in energy supply, transportation, waste management, water access and natural risks management.

All COP26 parties to introduce built environment regulations that are compatible with the 1.5°C climate targets, prioritize energy efficiency, fossil fuel use phase out and retrofitting. The regulations must ensure net biodiversity loss and maximize practicable protection of the users' health and livelihoods from the adverse effects of climate change, giving appropriate consideration to the use of Nature-based Solutions in climate mitigation and adaptation & resilience efforts.

⁴ International Union for Conservation of Nature (IUCN), 2021, "Water and climate change"
 UN, "https://www.unicef.org/press/2018/08/20180820-press-release-20180820"
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⁵ International Union for Conservation of Nature (IUCN), 2021, "Water and climate change"
 UN, "https://www.unicef.org/press/2018/08/20180820-press-release-20180820"
 UN, "https://www.unicef.org/press/2018/08/20180820-press-release-20180820"

SIGNATORIES

(i) Global Young Engineers Working Group on SDG 13 was launched as part of the World Federation of Engineering Organizations' Young Engineers/Future Leaders Committee. The Working Group aims to contribute to SDG 13 targets by promoting collaboration between WFEO young engineers in climate mitigation, adaptation and STEM skills development.

Contact: Mitesa Haldare (mhaldare@yfweg.com), Initiator and Lead of Global Young Engineers Working Group on SDG 13, Michelle Mouslim, Evangelos Poutos, Palki Kamra, Merveyla Chan, Members of the Working Group. The Working Group is hosted by the WFEO Committee on Young Engineers' Future Leaders (WFEO), Contact: Raia Bou Oueh, Chair of WFEO (YFWO) (r.bouo@yfweg.com)

(ii) Kirin Holdren, UN Youth4Climate Pre-COP26 Delegate representing Latvia, co-initiator of the joint statement. Contact: kirin.holdren@gmail.com

(iii) The Major Group for Children and Youth (MGCY) Science-Policy Interface Platform is the UN General Assembly-established, official, formal and self-organized mechanism for young people to meaningfully engage in certain UN processes related to sustainable development. Within the MGCY, the Youth Science-Policy Interface Platform was created to enhance the meaningful institutional engagement of youth within the science, technology and innovation and science policy interface architecture of the UN and beyond.

Contact: Maria Savelkoe and Victoria Lovell, Major Group for Children and Youth, Science-Policy Interface Platform (scipol@un.org)

(iv) Members of the UN Secretary-General's Youth Advisory Group on Climate Change bring the voices of young people into high-level decision making and advise the Secretary-General on the implementation of his 2020-21 Climate Change Strategy.

Contact: Nazem Usain (n.usain@un.org) Chair of the UN Secretary-General's Youth Advisory Group on Climate Change, Hadeen Sam (sam.hadeen@un.org), Hadeen Chah, Sophie Harris, Actions Sorvig, Ernest Cibach, Members of the UN Secretary-General's Youth Advisory Group on Climate Change

(v) YOUNGO is the Youth Constituency of the UNFCCC (http://youngclimate.org/). YOUNGO consists of many youth-led organizations, groups, delegations, and individuals working in climate change-related fields. YOUNGO is organized in different Working Groups that focus on different aspects of the UNFCCC negotiations and beyond, and work to ensure that perspectives of young and younger generations are taken into account in the international decision-making processes.

Contact: Hetta Lahiri and Marie-Chère Guay, YOUNGO Fossil Fuels (hetta.lahiri@unfccc.org, marie-cher@unfccc.org)

(vi) The Global Youth Climate Network (GYCN) is a volunteer initiative of the Youth-to-Youth (Y2Y) Community of young professionals at the World Bank Group (WBG). GYCN aims to engage the global youth community and act as catalysts to raise awareness of climate change and drive climate action. We aspire to empower youth to work on tangible climate solutions in their communities and globally.

Contact: Alexa Scottarola and Nurana Asad, Global Youth Climate Network Co-Chairs (gs@worldbankgroup.org)

ENDORING SIGNATORIES

(i) The World Federation of Engineering Organizations is the largest global engineering federation bringing together national engineering institutions from 100 nations and representing 30 million engineers. It is represented at major UN organizations and co-chairs the Scientific and Technological Community (STC) Major Group of the UN.

(ii) The International Secretariat of Water - Secretariat International de l'eau (SIE) is a non-governmental organization based in Montreal, Canada. The SIE envisions a world in which water is equitably accessible to all, fostering the empowerment of local actors as well as cooperation between borders, generations and institutions. SIE's mission is to initiate and facilitate actions that contribute to positive systemic changes in the framework of water governance from the local to the global level.

(iii) The Global Water Partnership (GWP) is a multi-stakeholder action network and inter-governmental organization dedicated to working with countries towards the equitable, sustainable, and efficient management of water resources. We comprise 1,000+ partner organizations in over 130 countries. Our network of 65+ Country Water Partnerships and 12 Regional Water Partnerships convenes and brokers coordinated action by government and non-government actors. A long time advocate for integrated water resources management, we draw on implementation expertise at the local level and link it across our Network and to global development agendas.

(iv) COP26 and beyond (www.COP26andbeyond.com) with followers in over 143 countries, was established by Edward Sam, William Wilson, and aims to demystify climate change and to suggest new, practical ways in which committed young people can make a real difference - before, at, and after COP26.

(v) Charles Hendry CBE C.F., former Minister of State for Business, Energy and Clean Growth of the United Kingdom.

(vi) Engineers Without Borders International provides an international movement of Engineers Without Borders/Ingenieurs Sans Frontières organizations. Together the movement works towards a sustainable world where engineering enables long-term positive social and global development for the benefit of people and the environment everywhere.

(vii) Engineering for Change (E4C) is a knowledge organization dedicated to preparing, educating and activating the international engineering workforce to improve the quality of life of vulnerable communities. E4C reaches over 1 million people with resources, talent and platforms that accelerate the development of solutions and infuse engineering rigor into sustainable development.

(viii) The World Youth Scientists Summit (WYSS) is an annual academic event for the world's young talents, aiming to build an open exchange platform for young scientists worldwide, response to global challenges and create a better future for mankind. The Young Climate Action Summit will be launched in the framework of WYSS.

(ix) The World Youth Earth Scientists (YES) Network is an international scientific organization for young and early career geoscientists who are under 35 years old or graduated from their PhD within 10 years. The mission of the YES is promoting the earth science for society, and climate being one of the ten topics, within the network focus.

(x) Resilience Shift is a catalyst for positive change. Our mission is to help ensure the safety and continuity of the critical infrastructure and services that make our lives possible. From water and transportation through to communications and energy, it is essential to everything we do. We're working globally to help define this and provide pathways from theory to practice. This thinking underpins the founding of the Resilience Shift Initiative. We are not just a think tank, not just a grant-making body, and not just a convening network. Our impact is achieved through a proactive approach combining all three of these.

(xi) Engineers Without Borders Australia is headquartered in Australia with offices in Cambodia, Vanuatu and Timor-Leste. We use engineering as a critical enabler of positive change, offering the opportunity for our profession to step up and steward the technological changes needed, from appropriate community solutions to sophisticated technology, so that the planet, all people and all living things, thrive.

This joint statement (available here) was issued to United Nations Heads of Member States, COP admitted NGOs and IGOs, calling for endorsement of this declaration.





The world's engineers
united in rising to
the world's challenges.
For a better, sustainable
world.



The World Federation of Engineering Organizations
Fédération Mondiale des Organisations d'Ingénieurs

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